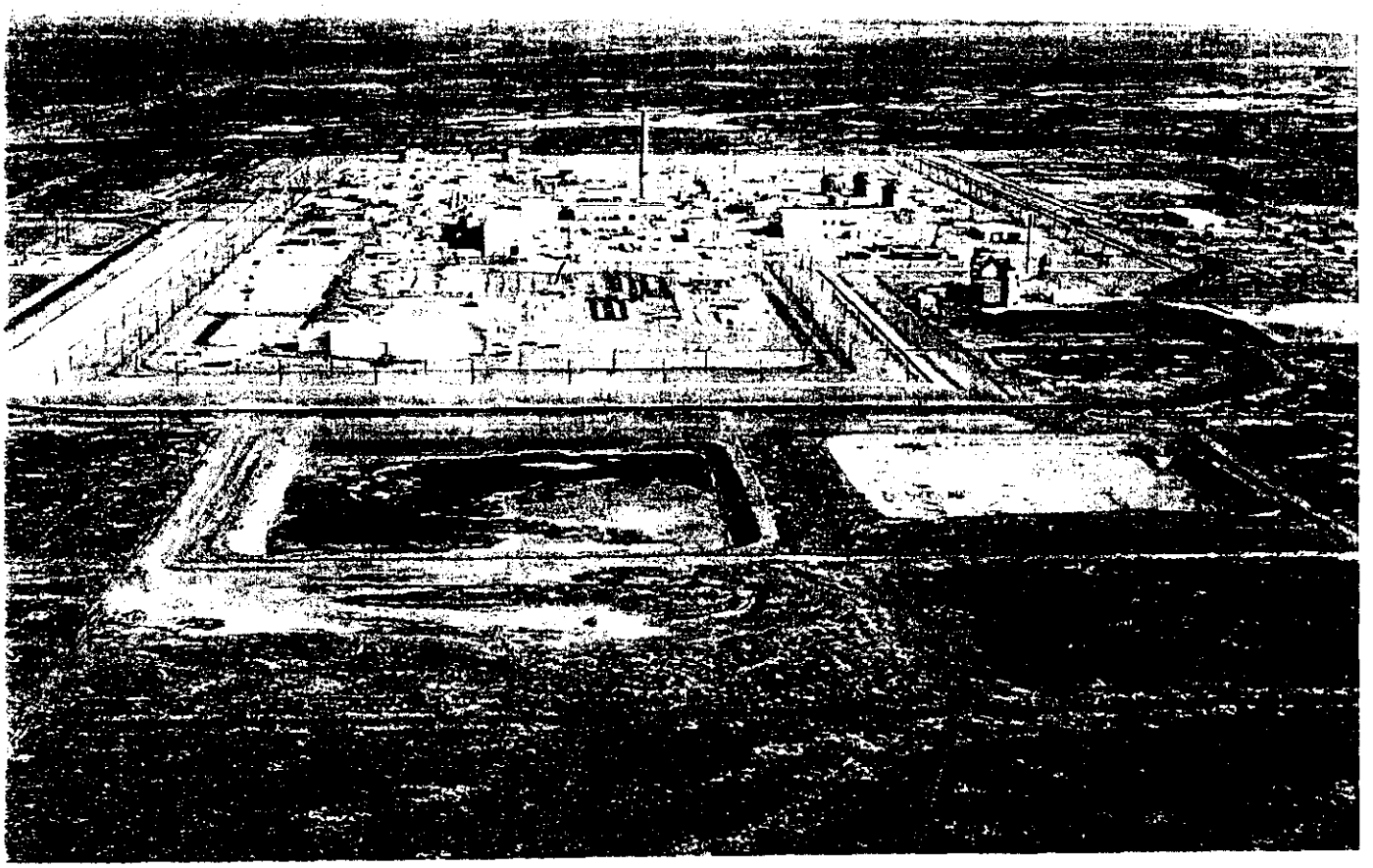
INEEL
IDAHO NATIONAL ENGINEERING & ENVIRONMENTAL LABORATORY

IDAHO DEPARTMENT OF HEALTH AND WELFARE

DIVISION OF ENVIRONMENTAL QUALITY

Final Record of Decision

Idaho Nuclear Technology and Engineering Center



Operable Unit 3-13
Idaho National Engineering and Environmental Laboratory
Idaho Falls, Idaho

DOE/ID-10660
Revision 0

Final Record of Decision
Idaho Nuclear Technology and Engineering Center

October 1999

Operable Unit 3-13
Idaho National Engineering and Environmental Laboratory
Idaho Falls, Idaho

DECLARATION OF THE RECORD OF DECISION

Site Name and Location

Idaho Nuclear Technology and Engineering Center, Waste Area Group 3
Operable Unit 3-13
Idaho National Engineering and Environmental Laboratory (CERCLIS ID 4890008952)
Idaho Falls, Idaho

Statement of Basis and Purpose

The Idaho Nuclear Technology and Engineering Center (INTEC) (formerly the Idaho Chemical Processing Plant) Waste Area Group (WAG) 3 is one of 10 Idaho National Engineering and Environmental Laboratory (INEEL) WAGs identified in the Federal Facility Agreement and Consent Order (FFA/CO) by the U.S. Department of Energy Idaho Operations Office (DOE-ID), the U.S. Environmental Protection Agency (EPA) Region 10, and the Idaho Department of Health and Welfare (IDHW). Operable Unit (OU) 3-13 is listed as the "WAG 3 Comprehensive Remedial Investigation (RI)/Feasibility Study (FS)" in the FFA/CO (DOE-ID 1991). The objective of the comprehensive RI/FS is to: (1) review previous WAG 3 investigations, (2) investigate release sites not previously evaluated, (3) determine the risks posed by individual release sites and the overall risk posed by the WAG, and (4) identify, screen, and analyze remedial alternatives for release sites where risks are determined to be greater than allowable levels.

This Record of Decision (ROD) presents the disposition of 101 identified release sites including four newly identified sites. Sixty-one release sites were determined to exhibit unacceptable risks that if not addressed may present an imminent and substantial endangerment to human health and the environment. Appropriate remedies for 55 of the sites are described in this ROD, while the remaining six sites were judged to be more appropriately managed under other OUs, WAGs, or INEEL regulatory programs. Information is provided in this ROD to support the remedial action decisions for the 55 release sites where contamination presents unacceptable risks or poses a threat, and to support the "No Action" and "No Further Action" decisions for the other 40 sites. These remedial actions are chosen in accordance with the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980 as amended by the Superfund Amendments and Reauthorization Act (SARA) of 1986, and to the extent practicable, with the National Oil and Hazardous Substances Pollution Contingency Plan (NCP). The selected remedial actions are also intended to satisfy the requirements of the FFA/CO. These decisions are based on the Administrative Record for WAG 3, OU 3-13.

The DOE-ID is the lead agency for the remedy decisions under Executive Order 12580. The EPA approves the decisions, and along with the IDHW, has participated in the selection of the final remedies. The IDHW concurs with the selected remedies for the WAG 3 sites of concern, the "No Action" and "No Further Action" determinations, and the sites that will be administered under other INEEL regulatory programs. The basis for decisions are made in this ROD and documented in the Administrative Record for WAG 3, OU 3-13. The DOE, EPA, and IDHW will be collectively referred to as the Agencies in this document.

Assessment of the Site

Fifty-five of the 101 identified release sites within WAG 3 have actual or threatened releases of hazardous substances that, if not addressed by implementing the response actions selected in this ROD, may present an imminent and substantial endangerment to human health and/or the environment. Six other sites are identified in this ROD that will be managed under other OUs, WAGs, or INEEL regulatory programs. The response actions selected in this ROD are designed to reduce the potential threats to human health and/or the environment to acceptable levels. The remaining 40 sites are designated as "No Action" or "No Further Action" sites. Thirty-four of these 40 sites are determined to have an acceptable risk to human health and/or the environment, under current industrial and future potential residential land use, and are designated as "No Action" sites. The six other sites are identified as "No Further Action" and may present an unacceptable risk to human health if land use changes prior to 2095 or if future construction requires excavations below the assumed 3 m (10 ft) residential basement scenario.

Description of the Selected Remedies

The WAG 3 release sites were grouped according to shared characteristics or common contaminant sources. The seven groups include: (1) Tank Farm Soils, (2) Soils Under Buildings and Structures, (3) Other Surface Soils, (4) Perched Water, (5) Snake River Plain Aquifer (SRPA), (6) Buried Gas Cylinders, and (7) SFE-20 Hot Waste Tank System. Because the release sites in each group have common characteristics or contaminants, a single remedy is selected for all release sites within each group. In addition, those sites classified as "No Further Action" sites require institutional controls to remain protective. Institutional Controls are also a part of the remedy for each of the seven groups described below. Institutional Controls will be established in accordance with the requirements set forth in the April 1999, EPA Region 10 Policy. The selected remedy for each group is described below.

Tank Farm Soils Interim Action (Group 1)

The Tank Farm Soils represent principal threat wastes due to direct radiation exposure to workers or the public; and due to potential leaching and transport of contaminants to the perched water or the SRPA, a sole source aquifer. A final remedy for the Tank Farm Soils release sites has been deferred pending further characterization and coordination of any proposed remedial actions with the Idaho High Level Waste (HLW) and Facilities Disposition (FD) Environmental Impact Statement (EIS), currently in preparation. A separate RI/FS, Proposed Plan, and ROD will be prepared for the Tank Farm Soils under OU 3-14. Interim actions were evaluated to provide protection until a final remedy is developed and implemented. The selected Tank Farm Soils Interim Action is Institutional Controls with Surface Water Control. The major components of this remedy include:

- Restrict access to control exposure to workers and prevent exposure to the public from soils at the Tank Farm until implementation of the final remedy under OU 3-14
- Accommodate a 1 in 25-year, 24-hour storm event with surface water run-on diversion channels
- Minimize precipitation infiltration by grading and surface sealing the Tank Farm Soils sufficient to divert 80% of the average annual precipitation falling on the Tank Farm Soils area
- Improve exterior building drainage to direct water away from the contaminated areas.

The Agencies believe this interim action will be protective of human health and the environment while the OU 3-14 RI/FS is being performed and a final remedy is selected. The interim action will comply with applicable or relevant and appropriate requirements (ARARs), be cost effective, and is consistent with the expected final Tank Farm remedy or the HLW&FD EIS. The Tank Farm Soils group includes one new site, CPP-96 (Tank Farm Interstitial Soils). Site CPP-96 is a consolidation of all of the previously identified Tank Farm Soils sites and the intervening interstitial soils within the site CPP-96 boundary.

Soils Under Buildings and Structures (Group 2)

The major threats posed by Soils Under Buildings and Structures release sites are direct radiation exposure to workers or the public caused by intrusion into contaminated soils and potential soil contaminant leaching and transport to perched water or the SRPA. The purpose of the selected remedy is to minimize the potential for direct exposure to contaminated soils and to prevent or reduce the leaching of contamination from the soils to the perched water or SRPA.

Until the buildings and structures above these sites are closed, and decontamination and dismantlement (D&D) occurs, it is assumed that the building or structure limits infiltration of water through the contaminated soils and prevents direct exposure to the contaminated soils. The selected deferred action remedy for Soils Under Buildings and Structures is Institutional Controls and Containment. The major components of the selected remedy include:

- Implement institutional controls, including site access restrictions, and periodic inspections of buildings or structures to ensure that infiltration is limited and exposures to contaminated soil is prevented. Access to the Group 2 sites will be restricted through the use of warning signs. Notification of this restriction will be made to the affected local county governments, ShoBan Tribal Council, General Services Administration (GSA), U.S. Bureau of Land Management (BLM), and other agencies, as necessary.

- Assess completed D&D building or structure and release site configuration to determine if they prevent radiation exposures or limit contaminant migration to the SRPA, as would be achieved through meeting the substantive requirements of Idaho Administrative Procedures Act (IDAPA) 16.01.05.008 (40 Code of Federal Regulations [CFR] 264.310). If the completed D&D configuration is assessed as inadequate for long-term protection of human health and the environment, then contaminated soils will be capped in conformance with the above referenced hazardous waste landfill closure requirements with an engineered barrier, or removed and disposed on-Site as discussed in the following section for Group 3 soils. Environmental monitoring and maintenance requirements will be included in the OU 3-13 post-ROD monitoring plan.

- The Waste Calciner Facility (WCF) has been closed under an approved Hazardous Waste Management Act (HWMA) closure plan and a post-closure monitoring and maintenance plan is required. In order to reduce the duplication of effort for monitoring and maintenance of the WCF, maintain consistency with the publicly-noticed WCF closure plan, and acknowledge the Resource Conservation and Recovery Act (RCRA)/CERCLA parity policy these requirements will be addressed under this ROD as ARARs. The WCF will be included during the CERCLA 5-year reviews with the Group 2 Soils Under Buildings and Structures sites and will address the substantive requirements of IDAPA 16.01.05.008 (40 CFR 264.310). Additionally these requirements will be incorporated into the post-ROD monitoring plan for OU 3-13.

Other Surface Soils (Group 3)

The Other Surface Soils release sites are also principal threat wastes due to potential external exposure of workers or the public to radionuclide-contaminated soils. The purpose of the selected remedy is to prevent external exposure to radionuclides at these sites and to allow these sites to be released for unrestricted use in the future. The selected remedy for Other Surface Soils is Removal and Onsite Disposal in the INEEL CERCLA Disposal Facility (ICDF). Those Group 3 release sites that, prior to excavation, are identified as part of the footprint of another program's closure activity and that, to the Agencies' satisfaction, will be closed with equivalent protection to that afforded by the ICDF to groundwater and future users, will not be excavated but instead capped in place pursuant to the hazardous waste landfill closure substantive requirements of IDAPA 16.01.05.008 (40 CFR 264.310).

Major components of the selected remedy include:

- Remove contaminated soil and debris from Group 3 sites using the following conventional excavation methods:
  - Remove contaminated soils and debris above the 1×10^{-4} risk level based on an assumed future residential use in the Year 2095 and beyond and replace with clean soil, so that from the surface to a depth of 3 m (10 ft) the land can be released for future residential use. Contamination below 3 m (10 ft) may also be excavated at the discretion of the DOE, if determined to be more cost effective than maintaining necessary institutional controls, to prevent future drilling through deep contamination zones and transportation of contaminants to the underlying aquifer. In addition, excavation activities below the 3 m (10 ft) depth that could cause the movement of contaminants either to the surface or to the underlying aquifer will also be controlled.
  - Dispose of contaminated soils and debris in the ICDF.
  - Survey and record contamination left in place at depths below 3 m (10 ft) for future institutional controls, as necessary.
  - Replace excavated soils with clean backfill and regrade.
- Construct the ICDF complex, which will include an engineered facility meeting RCRA Subtitle C, Idaho HWMA and polychlorinated biphenyl (PCB) landfill design and construction requirements. The ICDF will be located within the WAG 3 area of contamination (AOC). Design and operational requirements for the ICDF include:
  - Dispose only INEEL on-Site CERCLA wastes meeting agency-approved ICDF Waste Acceptance Criteria (WAC), to be developed during the remedial design, in the ICDF. An important objective of the WAC will be to assure that hazardous substances disposed in the ICDF will not result in exceeding groundwater quality standards in the underlying drinking water aquifer (SRPA), even if the ICDF leachate collection system were to fail after closure.
  - Design to have a total capacity of approximately 390,000 m^3 (510,000 yd^3).

- Engineer to meet IDAPA 16.01.05.008 (40 CFR 264.301) for hazardous waste, 40 CFR 761.75 for PCB, and DOE Order 435.1 for radioactive waste landfill design and operating substantive requirements.

- Locate in an area meeting hazardous waste, PCB waste, and low-level radioactive waste (LLRW) landfill siting requirements. Through a preliminary evaluation of all the relevant decision criteria, the Agencies have determined the "Study Area" for siting the ICDF to be the CPP-67 Percolation Ponds and adjacent areas to the west. However, the specific ICDF cell locations will be determined through the completion of a comprehensive geotechnical evaluation of the entire Study Area, which shall be reviewed and approved by the Agencies. Siting criteria for the location of the ICDF included:

  - Outside the 100-year flood plain
  - Outside of wetland areas
  - Not in active seismic zones
  - Not in high surface erosion areas
  - Not in an area of high historic groundwater table.

- Construct and operate an ICDF supporting complex, including a waste Storage, Sizing, Staging, and Treatment (SSST) facility, in accordance with the substantive requirements of IDAPA 16.01.05.008 (40 CFR 264 Subparts DD, I, J, and X) and IDAPA 16.01.05.006.01 and 16.01.05.006.02 (40 CFR 262.34[a][1]). It is anticipated that this facility will consist of a storage/staging building, an evaporation surface impoundment, a waste shredder, solidification/stabilization tanks, and associated equipment. Operations at the facility will include chemical/physical treatment to prepare ICDF wastes to meet Agency-approved WAC and RCRA land disposal restrictions (LDRs).

- Use one or more remediation waste staging and storage areas to stage and handle remediation waste. Operate the storage areas in accordance with the substantive requirements of IDAPA 16.01.05.006.01 and 16.01.05.006.02 (40 CFR 262.34[a][1]).

- Manage and treat monitoring well construction and sampling wastes generated prior to construction of the ICDF and SSST (i.e., purge water, decontamination water, and drill cuttings) using remediation waste staging piles and temporary treatment units in accordance with the substantive requirements of IDAPA 16.01.05.008 (40 CFR 264.553 and 40 CFR 264.554). Accomplish treatment using mobile tankage and physical/chemical treatment and comply with the substantive requirements of IDAPA 16.01.05.008 (40 CFR 264 Subpart J, BB, and CC).

- Construct and designate an evaporation pond as a Corrective Action Management Unit (CAMU) in accordance with the substantive requirements of IDAPA 16.01.05.008 (40 CFR 264.552 and 40 CFR 264 Subparts K and CC) for the purpose of managing ICDF leachate and other aqueous wastes generated as a result of operating the ICDF complex.

- Operate, close, and post-close the ICDF complex in accordance with the substantive requirements of IDAPA 16.01.05.008 (40 CFR 264 Subparts G, F, and N), and maintain site access restrictions and institutional controls throughout the post-closure period.

Perched Water (Group 4)

The INTEC Perched Water does not currently pose a direct human health and/or environmental threat. This perched water exists primarily as a result of facility water usage and subsequent discharge to percolation ponds at INTEC. It is not used as a source of drinking water and is expected to disappear when INTEC operations cease. However, perched water does pose a threat as a contaminant transport pathway to the SRPA. Contaminants already in the perched water are a potential source of SRPA contamination. The perched zone may impact SRPA groundwater quality because it is a contaminant transport pathway between contaminated surface soils and the SRPA. Although a future water supply well screened in the perched water is not capable of providing sufficient water for domestic use purposes, restrictions will be required to prevent any future attempts to use perched water after 2095 when INEEL-wide institutional controls are projected to end. A response action is necessary to minimize or eliminate the leaching and transport of contaminants from the perched water to the SRPA and to prevent future perched water use.

The selected remedy for the Perched Water is Institutional Controls with Aquifer Recharge Control. This remedy includes:

- Implement institutional controls (to include a DOE-ID Directive limiting access) to prevent perched water use while INTEC operations continue and to prevent future drilling into or through the perched zone (through noticing this restriction to local county governments, ShoBan Tribal Council, GSA, BLM, and other agencies as necessary).

- Implement remedies to control surface water recharge to perched water beneath INTEC by specifically taking the existing INTEC percolation ponds, which are estimated to contribute about 70% of the perched water recharge, out of service. Limiting infiltration to the perched water will minimize potential releases to the SRPA by reducing the volume of water available for contaminant transport. Design, construction, and operate replacement ponds outside of the INTEC perched water area following the removal of the existing INTEC percolation ponds from service. The replacement percolation ponds will be sited about 3,048 m (10,000 ft) southwest of the INTEC and will be operational on or before December 2003.

- In addition, minimize recharge to the perched water from lawn irrigation, and lining the Big Lost River segment contributing to the INTEC perched water zones, if additional infiltration controls are necessary. Implement additional infiltration controls if the recession of the Perched Water zone does not occur as predicted by the RI/FS vadose zone model within 5 years of removing the percolation ponds. If implementation of the additional infiltration controls is necessary, implement as a second phase to the Group 4 remedy.

- Measure moisture content and contaminant of concern (COC) concentration(s) in the perched water zones to determine if water contents and contaminant fluxes are decreasing as predicted. Also use these data to verify the OU 3-13 vadose zone model and determine potential impacts to the SRPA.

Snake River Plain Aquifer (Group 5)

The major human health threat posed by contaminated SRPA groundwater is exposure to radionuclides via ingestion by future groundwater users. Based on the groundwater simulations presented in the FS (DOE-ID 1997a) and FS Supplement (FSS) (DOE-ID 1998a), removal of the existing percolation ponds from service will significantly reduce the concentrations of contaminants in SRPA groundwater by 2095. Additional remedial action may be necessary to meet the groundwater maximum contaminant levels (MCLs) of 4 mRem/yr for beta particle and photon-emitting radionuclides. Remedial action for the SRPA is bounded by the contaminant plume that exceeds Idaho groundwater quality standards or the federal MCLs for I-129, H-3, and Sr-90.

An interim action is selected for the SRPA. While the remediation of contaminated SRPA groundwater outside of the current INTEC security fence is final, the final remedy for the contaminated portion of the SRPA inside of the INTEC fence line is deferred to OU 3-14. As a result of dividing the SRPA groundwater contaminant plume associated with INTEC operations into two zones, the remedial action described herein is classified as an interim action. The selected interim action remedy for the SRPA is Institutional Controls with Monitoring and Contingent Remediation. The SRPA interim action remedy includes:

- Implement institutional controls over the area of the aquifer that exceeds the MCLs for H-3, I-129, and Sr-90 (to include a DOE-ID Directive limiting access) to prevent groundwater use while INTEC operations continue, and to restrict future groundwater use (through noticing this restriction to local county governments, ShoBan Tribal Council, GSA, BLM, etc.), including site access restrictions, drilling restrictions, and maintenance during DOE operations at INTEC.

- Implement institutional controls, including land use restrictions to prevent the use of SRPA groundwater over the area of the aquifer that exceeds the MCLs for H-3, I-129, and Sr-90, until drinking water standards are met, which are projected to be achieved by 2095.

- Construct new SRPA monitoring wells outside of the current INTEC security fence to assess whether MCLs will be exceeded after 2095.

- If observed COC(s) concentrations exceed their action levels at a sustained pumping rate of at least 0.5 gpm for 24 hours, implement pump and treatment remedial action. Extract contaminated SRPA groundwater from the zone of highest contamination and treat to reduce the contaminant concentrations to meet MCLs by 2095. The action level is the modeled maximum concentration predicted in the year 2000 so that the MCL will not be exceeded in 2095 (the projected end of the institutional control period).

- It is anticipated that standard pump and chemical/physical treatment (which may include evaporation in the ICDF Complex surface impoundment) will be able to meet the aquifer restoration goal. Conduct treatability studies, which include a technical evaluation of treating the I-129 and other COCs, as part of this remedy. These studies may include evaluation of the ability to treat and selectively withdraw contaminants from the aquifer. It is estimated that these studies will not extend more than 12 months and are limited to a total cost of $2 million.

- If the treatability studies indicate the presence of sufficient quantities of I-129 and other COCs, and contaminated groundwater can be selectively extracted and cost-effectively

treated to meet the drinking water MCLs outside the current INTEC security fence by 2095, then implement active remediation.

- Either return treated water to the aquifer through land recharge in accordance with the Idaho Wastewater Land Application ARARs if a recharge impoundment is used; or in accordance with National Pollutant Discharge Elimination System (NPDES)/State Pollutant Discharge Elimination System (SPDES) ARARs if the treated effluent is discharged to the Big Lost River, which recharges the aquifer downstream of the INTEC facility; or evaporate in the ICDF complex evaporation pond or equivalent.

Buried Gas Cylinders (Group 6)

The Buried Gas Cylinders pose a safety hazard to inadvertent intruders (i.e., backhoe operators or drillers). The cylinders are presumed to be pressurized and could burst during excavation. In addition, hydrofluoric acid, which may be present in the cylinders, is very corrosive, reacts violently with moisture, and can generate explosive concentrations of hydrogen gas. The selected remedy for the Buried Gas Cylinders is Removal, Treatment, and Disposal. This alternative includes:

- Remove the gas cylinders using a contractor specializing in gas cylinder removal
- Treat the cylinder contents, if necessary
- Recycle or dispose of the empty gas cylinder containers.

The Agencies may elect to pursue a contingent remedy of capping in place pursuant to the substantive requirements of IDAPA 16.01.05.008 (40 CFR 264.310) if safety concerns with excavation and removal prevent implementation of the selected remedy.

SFE-20 Hot Waste Tank System (Group 7)

The major threat posed by the SFE-20 Hot Waste Tank System is leaching and transport of contaminants to the SRPA and subsequent exposure of future groundwater users to radionuclides via ingestion. The selected alternative for the SFE-20 Hot Waste Tank System is Removal, Treatment, and Disposal. This alternative includes:

- Remove and treat on-site the liquid and sludge contents of the tank.
- Excavate and remove the tank, vault, and associated structures.
- Land dispose treated waste, the tank, vault, and other debris. The preferred disposal site is the ICDF; however, if any residue or material fails to meet the ICDF WAC, an alternate suitable disposal facility will be identified during the remedial design.
- Remove and treat off-site, if wastes found in the tank are alpha-LLW (i.e., exceed 10 nCi/g transuranic [TRU] constituents [alpha emitters with an atomic number greater than 92 and a half-life exceeding 20 years]) or TRU wastes (i.e., greater than 100 nCi/g TRU).

"No Action" Sites

Ten sites were determined to be "No Action" sites with the signing of the FFA/CO. Twenty-four additional "No Action" sites have been determined in this ROD. These sites each represent less than 1×10^{-4} risk and a hazard index (HI) of less than 1 for the potential residential scenario, and could be available for current unrestricted use.

"No Further Action" Sites

Six of the 101 sites addressed in this ROD are classified as "No Further Action" sites and require only institutional controls to remain protective. These controls will ensure that the land use will remain industrial until at least 2095 at which time contaminant levels will be reduced sufficiently to be protective for residential use. Those sites with contamination at depths below traditional residential construction (i.e., 3 m [10 ft]), that do not require remedial action to safeguard the drinking water aquifer from future contaminant releases, will continue to require institutional controls to prevent excavation or drilling below 3 m (10 ft) to remain protective.

Closed and Closing RCRA/HWMA Sites

Sites being closed under RCRA/HWMA will be handled as previously described for the WCF. The WCF has been closed under an approved HWMA closure plan and a post-closure monitoring and maintenance plan is required. In order to reduce the duplication of effort for monitoring and maintenance of the WCF, maintain consistency with the publicity-noticed WCF closure plan, and acknowledge the RCRA/CERCLA parity policy, these requirements will be addressed under this ROD as ARARs. The WCF will be included during the CERCLA 5-year reviews with the Group 2 Soils Under Buildings and Structures release sites and will address the substantive requirements of IDAPA 16.01.05.008 (40 CFR 264.310). Additionally these requirements will be incorporated into the post-ROD monitoring plan for OU 3-13.

Disturbances of OU 3-13 Sites

The INTEC facility is an operating facility. As such, periodic maintenance and upgrade activities will be conducted during the implementation of the remedial actions under this ROD. Prior to conducting any site disturbance activities, the Agencies will be notified to the extent of any disturbance, and will be provided a plan for their approval, including necessary corrective actions that will be performed to ensure that the remedies identified in this ROD remain operational and functional. A formal system for notification and approval of disturbances to OU 3-13 sites will be developed during the remedial design.

Sites Managed Under Other Operable Units, WAGs, or INEEL Regulatory Programs

Six of the release sites identified in WAG 3 are outside the scope of this ROD and, therefore, will be managed under other OUs, WAGs, or other INEEL regulatory programs. Site CPP-38 (asbestos in nine INTEC buildings) will be addressed by the INEEL Asbestos Management Program. Site CPP-65 (Sewage Treatment Plant Lagoons) will be addressed under the Idaho Wastewater Land Application Rules. Site CPP-66 (Steam Plant Fly Ash Pits) only presents a potential ecological risk and will be addressed under CERCLA OU 10-04, which focuses on INEEL-wide ecological risk concerns. Sites CPP-61, -81, and -82 will be further evaluated and addressed under the OU 3-14 RI/FS.

New Sites

Four new sites are identified in this ROD. Site CPP-96 (Tank Farm Interstitial Soils) is a consolidation of all of the previously identified Tank Farm release sites and the intervening interstitial soils within the site CPP-96 boundary. This site also includes three sites that were determined through the Track 2 process to be "No Action" sites. The final remedy for release site CPP-96 will be addressed in the OU 3-14 Tank Farm RI/FS along with other Group 1 sites. Release site CPP-97 (Tank Farm Soil Stockpile), CPP-98 (Tank Farm Shoring Boxes), and CPP-99 (Boxed Soil) are added to this ROD to address soil stockpiles and wood construction debris that originated from the Tank Farm upgrade and/or the building CPP-604 tunnel egress projects. These sites are included as part of the OU 3-13 Group 3 sites and will be remediated accordingly.

Statutory Determination

The selected remedy for each release site group, the "No Action" sites, and "No Further Action" sites have been determined to be protective of human health and/or the environment, to comply with federal and state regulations that are ARARs for the remedial actions, and to be cost-effective.

The selected remedies use permanent solutions and alternative treatment technologies to the maximum extent practicable. The selected remedies for the Buried Gas Cylinder sites (Group 6) and the SFE-20 Hot Waste Tank System (Group 7) incorporate treatment, and the selected interim action remedy for the SRPA (Group 5) incorporates treatment if COCs in the aquifer outside the current INTEC security fence exceed action levels. However, treatment of radionuclide-contaminated soil and perched water was not found to be practicable for the other groups and, therefore, the selected remedies for the Soils Under Buildings or Structures (Group 2), Other Surface Soils (Group 3), and Perched Water (Group 4) do not satisfy the statutory preference for treatment as a principal element of the remedy. The EPA's preferred remedy for sites that pose relatively low, long-term threats, or where treatment is impracticable, is engineering controls, such as containment. The selected remedial alternatives for Soils Under Buildings or Structures (Group 2) and Perched Water (Group 4) will result in contaminants left in place at concentrations exceeding health-based concentrations for direct exposure, but the contaminants will not be available to present unacceptable risk to human health and/or the environment.

Because these remedies will result in hazardous substances, pollutants, or contaminants remaining onsite above levels that allow for unlimited use and unrestricted exposure, a statutory review will be conducted within 5 years after initiation of the remedial actions to ensure that each remedy is, or will be, protective of human health and the environment. This review will also assess the need for continued long-term environmental monitoring, administrative controls, and institutional controls at each group and "No Further Action" site. Reviews will be held no less frequently than every 5 years thereafter to ensure that the remedies continue to be protective. These periodic reviews will be discontinued when the Agencies determine that the sites no longer pose an unacceptable risk to human health and/or the environment and site access or use restrictions are no longer required.

The 5-year reviews will evaluate factors such as contaminant migration from sites where contamination has been left in place, newly discovered sites, effectiveness of institutional controls, and effectiveness of the remedial actions. For remedies incorporating institutional controls, it is assumed that institutional controls will remain effective until the year 2095. Additional institutional controls will apply to specific sites after 2095. This time period is consistent with the 100-year industrial land use assumption for the INTEC.

Sites for which "No Further Action" determinations were made, based on an industrial land use assumption through 2095, and residential thereafter, will be included in the 5-year reviews. These reviews will evaluate whether the "No Further Action" determination is still appropriate for the current and projected land uses at the time of the review.

Sites for which "No Action" determinations have been made based on no evidence of a source or release or where the risk is less than 1×10^{-4} or a HI less than 1 will not require institutional controls or 5-year reviews.

It is possible that new information will be discovered in the future during routine operations, maintenance activities, and/or D&D activities that will require additional remedial actions be taken at the sites listed in this ROD. Through the 5-year review process, the Agencies will evaluate new information to ensure that the selected remedy, including institutional controls, remain protective.

As INTEC is an operating facility, it is possible that changes in physical configuration of INTEC may uncover new sites or change the residual risk posed by those sites addressed under this ROD. Any planned disturbance at a site for which action is required under this ROD (including the "No Further Action" sites with institutional controls) will be preceded by appropriate planning documents to be submitted to and concurred on by the Agencies prior to implementation. Newly discovered sites will be subject to remedial action pursuant to the terms and conditions of the FFA/CO.

The following information is included in the decision summary section of this ROD; additional information can be found in the Administrative Record for WAG 3:

- COCs and their respective concentrations
- Baseline risks represented by the COCs
- Cleanup levels established for the COCs and the basis for the action levels
- Current and future land and groundwater use assumptions
- Land and groundwater use available at the site as a result of the remedy
- Estimated capital, operations and maintenance, and net present value costs, discount rate, and number of years over which costs are projected
- Description of alternatives
- Evaluation of the remedial action alternatives
- Decision factors that lead to selection of the remedies.

Signature Sheet

Signature sheet for the Record of Decision for Operable Unit 3-13, for the Idaho Nuclear Technology and Engineering Center, of the Idaho National Engineering and Environmental Laboratory, between the U.S. Department of Energy and the U.S. Environmental Protection Agency, with concurrence by the Idaho Department of Health and Welfare.

Chuck Clarke

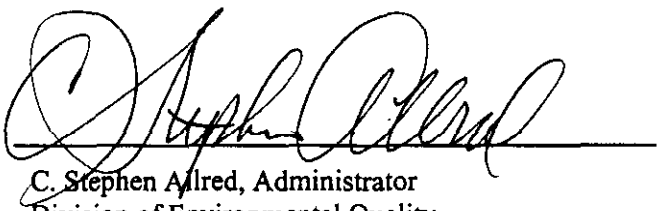
Chuck Clarke, Regional Administrator
Region 10
U.S. Environmental Protection Agency

9/28/95

Date

Signature Sheet

Signature sheet for the Record of Decision for Operable Unit 3-13, for the Idaho Nuclear Technology and Engineering Center, of the Idaho National Engineering and Environmental Laboratory, between the U.S. Department of Energy and the U.S. Environmental Protection Agency, with concurrence by the Idaho Department of Health and Welfare.



10/7/99

C. Stephen Allred, Administrator
Division of Environmental Quality
Idaho Department of Health and Welfare

Date

Signature Sheet

Signature sheet for the Record of Decision for Operable Unit 3-13, for the Idaho Nuclear Technology and Engineering Center, of the Idaho National Engineering and Environmental Laboratory, between the U.S. Department of Energy and the U.S. Environmental Protection Agency, with concurrence by the Idaho Department of Health and Welfare.

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9-30-99

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ACRONYMS

ALARA	as low as reasonably achievable
AOC	area of contamination
ARAR	applicable or relevant and appropriate requirement
bgs	below ground surface
BRA	Baseline Risk Assessment
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
BLM	U.S. Bureau of Land Management
CAB	Citizens Advisory Board
CFR	Code of Federal Regulations
COC	contaminant of concern
COCA	Consent Order and Compliance Agreement
COPC	contaminant of potential concern
cpm	counts per minute
CSM	conceptual site model
COPC	contaminant of potential concern
D&D	decontamination and dismantlement
DEQ	Division of Environmental Quality
DOE	U.S. Department of Energy
DOE-ID	U.S. Department of Energy Idaho Operations Office
EBR	Experimental Breeder Reactor
EBSL	ecologically based screening level
EE/CA	engineering evaluation/cost analysis
EIS	Environmental Impact Statement
EPA	U.S. Environmental Protection Agency

ERA	ecological risk assessment
ESRP	Eastern Snake River Plain
FFA/CO	Federal Facility Agreement Consent Order
FD	facilities disposition
FR	Federal Register
FS	feasibility study
FSS	feasibility study supplement
GSA	General Services Administration
HEPA	high-efficiency particulate air
HEU	Highly Enriched Uranium
HHRA	human health risk assessment
HI	hazard index
H-I	a designation for a sedimentary interbed located between the H and I basalt layers.
HLW	high-level waste
HLLW	high-level liquid waste
HQ	hazard quotient
HWMA	Hazardous Waste Management Act
ICDF	INEEL CERCLA Disposal Facility
ICPP	Idaho Chemical Processing Plant
IDAPA	Idaho Administrative Procedures Act
IDHW	Idaho Department of Health and Welfare
IDW	investigation derived waste
INEEL	Idaho National Engineering and Environmental Laboratory
INTEC	Idaho Nuclear Technology and Engineering Center
LDR	Land Disposal Restrictions

LITCO	Lockheed Idaho Technology Company, Inc.
LLW	low-level waste
LMITCO	Lockheed Martin Idaho Technologies Company
MCL	maximum containment level
MCP	Management Control Procedure
NCP	National Contingency Plan
NEPA	National Environmental Policy Act
NESHAPS	National Emission Standards for Hazardous Air Pollutants
NPL	National Priorities List
NSR	no surface risks
NWCF	New Waste Calcining Facility
O&M	operating and maintenance
OU	operable unit
OSWER	Office of Solid Waste and Emergency Response
PCB	polychlorinated biphenyl
PEW	Process Equipment Waste
PPE	personal protective equipment
R&A	relevant and appropriate
RAO	remedial action objectives
RCRA	Resource Conservation and Recovery Act
RD/RA	remedial design/remedial action
RfD	reference dose
RI	remedial investigation
RI/BRA	remedial investigation/baseline risk assessment
ROD	Record of Decision

RWMC	Radioactive Waste Management Complex
SARA	Superfund Amendment Reauthorization Act
SCM	site conceptual model
SF	slope factor
SLERA	screening level ecological risk assessment
SNF	spent nuclear fuel
SRPA	Snake River Plain Aquifer
SSST	storage, stagings, sizing, and treatment
STP	sewage treatment plant
SVOC	semi-volatile organic compound
SWP	service waste percolation pond
TBC	to-be-considered
TCLP	toxicity characteristic leaching procedure
T/E	threatened and/or endangered
TRA	Test Reactor Area
TRU	transuranic
TRV	toxicity reference value
TSCA	Toxic Substances Control Act
TSDF	treatment, storage, and disposal facility
TU	temporary unit
UCL	upper confidence level
UREP	Utility Replacement and Expansion Project
UTL	upper tolerance level
VOC	volatile organic compound
WAG	waste area group

WCF	Waste Calcining Facility
WERF	Waste Experimental Reduction Facility
WINCO	Westinghouse Idaho Nuclear Company, Inc.
WIPP	Waste Isolation Pilot Plant
WWP	Warm Waste Pond